

7  
Bencid

a gate electrode formed on the channel region;  
a scanning line providing a voltage onto said gate electrode;  
a pixel electrode connected to the drain region and formed within a region surrounded by the data line and the scanning line; and  
an insulating layer covering the channel region of the active element, the scanning line and the data line, wherein said insulation film overlaps a peripheral area of the pixel electrode.

---

### **REMARKS**

Claims 1-6 and 8-17 are pending in this application. Of these pending claims, Claims 1-5 and 8-17 stand rejected. By this amendment, Claims 3, 13, and 14 have been cancelled. Also, Claims 1, 4, 8, 11, and 16-17 have been amended. In addition, Claims 18-28 have been added. The basis for these amendments and new claims can be found throughout the specification, claims and drawings as originally filed.

In view of the preceding amendments and the following remarks, reconsideration of the outstanding rejections is respectfully requested.

### **DRAWINGS**

Figures 1-10B of the Drawings stand objected to by the Draftsperson. Applicant submits herewith a Letter to the Official Draftsperson including proposed corrected Figures 1-10B, with corrections in red ink. Review and acceptance of the corrected drawings, and reconsideration of the objection, is respectfully requested.

In paragraph 2 of the Office Action, the Examiner states that Figures 1 and 2 of the

present application should include a legend such as “Prior Art” since “only that which is old is illustrated.” Applicant submits that the subject matter shown in Figures 1 and 2 describe an embodiment of the present invention. Thus, Applicant has not added a legend such as “Prior Art” since it would contradict that which is disclosed in the specification.

In paragraph 3 of the Office Action, the Examiner objects to the drawings under 37 CFR 1.83(a). Specifically, the Examiner objects to the use of the phrases “connection portion of the wiring layer”, “MIM” element, and “TFT” element.

In response, Applicant has elected to amend the claims to exclude the phrase “connection portion.”

With regard to the phrase MIM, Applicant submits that MIM is defined in the specification as constituting a first electrode portion 13, a thin insulating layer 14 and an electrode portion 15a (see page 9, lines 2-5). Each of these elements is shown in the drawings.

With regard to the phrase TFT element, TFT is described in the specification as including an active layer 51a, a gate insulating film 62, and a gate electrode 52a (see page 16, lines 5-16). Each of these elements is shown in the drawings.

As such, Applicant submits that the phrases “MIM” and “TFT” are defined in the drawings and specification.

### **SPECIFICATION**

In paragraph 4 of the Office Action, the Examiner suggested the preferred layout of the specification. Applicant has amended the specification in accordance with the preferred layout.

In paragraph 5 of the Office Action, the Examiner objected to the abstract of the disclosure because it contained more than one paragraph. As such, Applicant has amended the abstract of the disclosure to be one paragraph.

### **OBJECTIONS**

In paragraph 6 of the Office Action, the Examiner objected to Claim 1 because of an informality in the claim language. Accordingly, this informality has been corrected. Specifically, the phrase “one of” has been inserted before “said substrates” on line 4.

### **Rejections Under 35 U.S.C. §102**

In paragraph 8 of the Office Action, the Examiner rejected Claims 1-2, 8-10 and 16 under 35 U.S.C. §102(e) as being anticipated by Fujikawa et al. (U.S. 5,719,647). In paragraph 9 of the Office Action, the Examiner rejected Claims 1-2, 4, 8-10, 13-14 and 16 under 35 U.S.C. §102(b) as being anticipated by Sasaki et al. (U.S. 5,084,905). In paragraph 10 of the Office Action, the Examiner rejected Claims 1, 4-5, 9, 13 and 15 under 35 U.S.C. §102(b) as being anticipated by Wakai et al. (U.S. 5,003,356). These rejections are respectfully traversed. Notwithstanding, Applicant has elected to cancel Claims 3 and 13-14 and amend Claims 1, 4, 8, 11 and 16-17.

As amended, Claim 1 calls for a liquid-crystal display device including a source region and a drain region formed on at least one inner surface of one of said substrates. Claim 1 also calls for a wiring layer positioned above the source region and the drain region relative to the substrate. Claim 1 also calls for a pixel electrode coupled to the drain region.

In contrast, Fujikawa et al. disclose a first conductive layer 7 disposed on an insulating substrate 14. An insulating layer 8 is formed on the first conductive layer 7. An upper electrode 11 of a driving device is formed on the insulating layer 8. The upper electrode 11 is connected to a second conductive layer 9 through a contact hole 10. Fujikawa et al. do not disclose a source region and a drain region disposed on a substrate as claimed. Furthermore, Fujikawa et al. do not disclose a wiring layer positioned above the source region and the drain region relative to the substrate. Moreover, Fujikawa et al. do not disclose a pixel electrode coupled to the drain region as claimed.

In further contrast to Claim 1, Sasaki et al. discloses a gate electrode 32 disposed on a substrate 31. A drain electrode 37 and a source electrode 36 are stacked above the gate electrode 32. A pixel electrode 41 is coupled to the source electrode 36. The drain electrode 37 is not coupled to pixel electrode 41. Clearly, Sasaki et al. do not disclose a source region and a drain region disposed on a substrate as claimed. Furthermore, Sasaki et al. do not disclose a wiring layer positioned above the source region and the drain region relative to the substrate. Moreover, Sasaki et al. do not disclose a pixel electrode coupled to the drain region as claimed.

In further contrast to Claim 1, Wakai et al. discloses a gate electrode 102 disposed on a substrate 101. A drain electrode 106 and a source electrode 107 are stacked above the gate electrode 102. A transparent electrode 110 is coupled to a source electrode 107. As shown in Fig. 14C, a drain electrode 106 is not coupled to the pixel electrode as claimed. Wakai et al. do not disclose a source region and a drain region disposed on a substrate as claimed. Clearly, Wakai et al. do not disclose a wiring layer positioned above the source region and the drain region relative to the substrate. Moreover, Wakai et al. do not

disclose a pixel electrode coupled to the drain region as claimed.

As such, Applicant submits that Fujikawa et al., Sasaki et al. and Wakai et al. do not anticipate amended Claim 1. Applicant further submits that all claims depending therefrom are patentable.

Claim 8 has been amended to call for a liquid-crystal device including a wiring layer which has a first electrode portion integrally formed therewith and projecting toward a pixel region. Claim 8 also calls for a second electrode layer having an electrode portion disposed on the first electrode portion and a pixel contact portion extending from the electrode portion in a direction away from the first electrode portion. Claim 8 also calls for a pixel electrode coupled to the pixel contact portion of the wiring layer.

As previously described, Fujikawa et al. disclose a first conductive layer 7 disposed on an insulating substrate 14. An insulating layer 8 is formed on the first conductive layer 7. An upper electrode 11 of a driving device is formed **on** the insulating layer 8. Fujikawa et al. do not disclose a wiring layer having a first electrode portion integrally formed **therewith** as claimed. Furthermore, Fujikawa et al. do not disclose a second electrode layer disposed on the first electrode layer as claimed. Moreover, Fujikawa et al. do not disclose a pixel contact portion of the second electrode layer being coupled to a contact portion of the wiring layer as claimed.

In further contrast to Claim 8, Sasaki et al. do not disclose a wiring layer having a first electrode portion integrally formed therewith as claimed. Furthermore, Sasaki et al. do not disclose a second electrode layer disposed on the first electrode layer as claimed. Moreover, Sasaki et al. do not disclose a pixel contact portion of the second electrode layer being coupled to a contact portion of the wiring layer.

In further contrast to Claim 8, Wakai et al. do not disclose a wiring layer having a first electrode portion integrally formed therewith as claimed. Furthermore, Wakai et al. do not disclose a second electrode layer disposed on the first electrode layer as claimed. Moreover, Wakai et al. do not disclose a pixel contact portion of the second electrode layer being coupled to a contact portion of the wiring layer.

As such, Applicant submits that Fujikawa et al., Sasaki et al. and Wakai et al. do not anticipate amended Claim 8. Applicant further submits that all claims depending therefrom are in condition for allowance and respectfully requests allowance thereof.

Claim 16 has been amended to be patterned after Claim 8. As such, Applicant believes Claim 16 and all claims depending therefrom to be in condition for allowance. As such, Applicant respectfully requests allowance thereof.

#### **Rejections Under 35 U.S.C. §103**

In paragraph 12 of the Office Action, the Examiner rejected Claims 3, 11-12, and 17 under 35 U.S.C. §103(a) as being unpatentable over Fujikawa et al. as being obvious to one of ordinary skill in the art. These rejections are respectfully traversed. As previously described, Applicant elected to amend Claims 1, 4, 8, 11 and 16-17.

In view of these amendments and the discussion previously provided, Applicant submits that independent Claims 1, 8 and 16 are in condition for allowance. Furthermore, Applicant believes all dependent claims are in condition for allowance. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw rejections of independent Claims 3, 11-12 and 17.

### New Claims

Claims 18-28 have been added. The basis for these new claims can be found throughout the specification, claims and drawings as originally filed. Applicant believes that these new claims provide a scope of protection commensurate with the Applicant's contribution to the art.

### CONCLUSION

Applicant has considered the prior art references identified by the Examiner and believes the invention as claimed to be patentable over the prior art. Applicant respectfully submits that none of the cited references teach or suggest Applicant's claimed invention. In view of the foregoing amendments and remarks, Applicant respectfully submits that the application is in condition for allowance.

If the Examiner has any questions or comments, the Examiner is requested to contact the undersigned at his earliest convenience.

Respectfully submitted,

Dated: November 30, 2000

By: \_\_\_\_\_

  
G. Gregory Schivley

Reg. No. 27,382

Bryant E. Wade

Reg. No. 40,344

Attorneys for Applicants

Harness, Dickey & Pierce, P.L.C.  
P. O. Box 828  
Bloomfield Hills, MI 48303  
(248) 641-1600

GGG/BEW/COXR